



Pre-Application Workshop

EPIC Bioenergy 2016

Energy Research and Development Division

California Energy Commission

July 20, 21 and 22, 2016

Gina Barkalow



Agenda

7/20	Topic	7/21 & 7/22
9:30 am	Welcome and Introductions <ul style="list-style-type: none">• Housekeeping• Commitment to Diversity• Background• Solicitation Purpose, Goals, Funding• Eligible Applicants• Key Dates	10:30 am
9:45 am	<ul style="list-style-type: none">• Application Requirements• Attachment Overview• Match Funding• Proposal Approval Process	10:45 am
10:15 am	Questions and Answers on EPIC Bioenergy Solicitation	11:15 am
11:00 am	Adjourn & Networking	12:00 pm



Housekeeping

- In case of emergency
- Facilities
- Sign-in sheet
- Diversity Survey
 - Online Participant Link:
- <https://www.surveymonkey.com/r/CEC-07-22-2016>
- Updates on solicitation documents and today's presentation will be posted at:
Development, Demonstration, and Deployment of Environmentally and Economically Sustainable Biomass-to-Energy Systems for the Forest and Food Waste Sectors
<http://www.energy.ca.gov/contracts/epic.html#GFO-15-325>



Commitment to Diversity

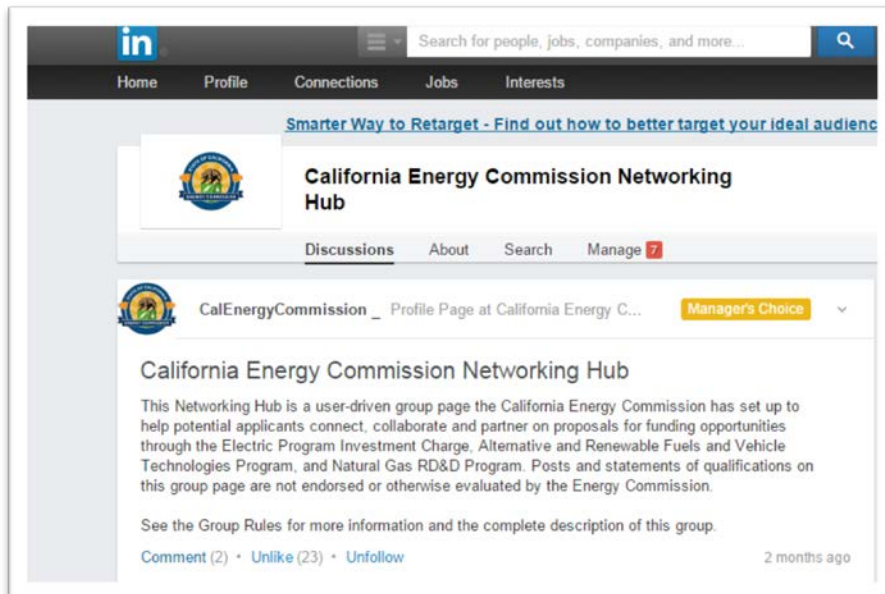
The Energy Commission adopted a resolution strengthening its commitment to diversity in our funding programs. We continue to encourage disadvantaged and underrepresented businesses and communities to engage in and benefit from our many programs.

To meet this commitment, Energy Commission staff conducts outreach efforts and activities to:

- Engage with disadvantaged and underrepresented groups throughout the state.
- Notify potential new applicants about the Energy Commission's funding opportunities.
- Assist applicants in understanding how to apply for funding from the Energy Commission's programs.
- Survey participants to measure progress in diversity outreach efforts.



Connect With Us



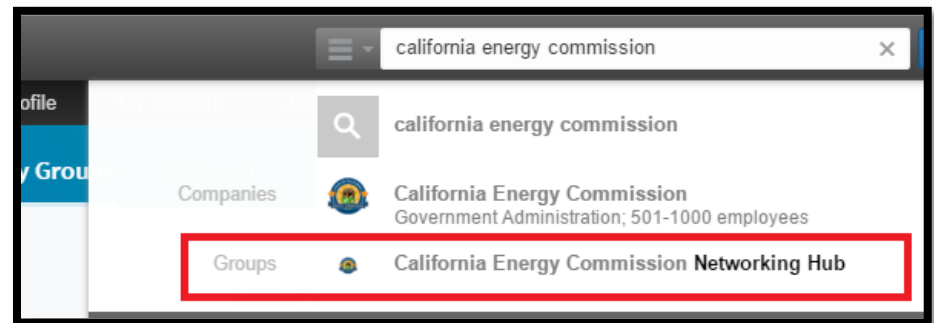


Find Partners via LinkedIn

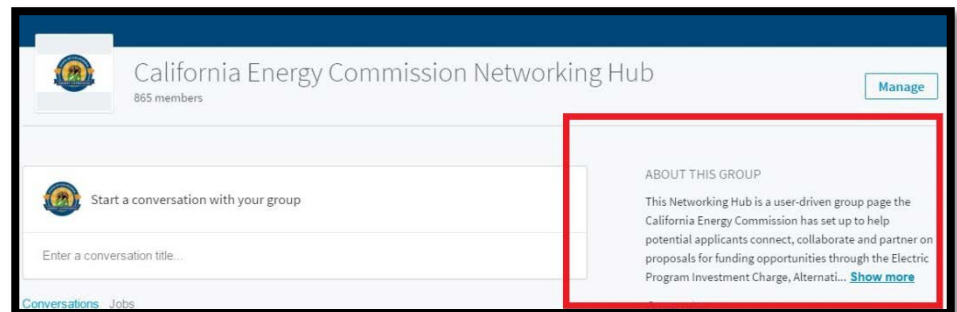
The Energy Commission created a user-driven LinkedIn group page to help potential applicants **connect**, **collaborate** and **partner** on proposals for funding opportunities.

Join the “California Energy Commission Networking Hub” using:

- The LinkedIn Search Box
- URL: bit.ly/CalEnergyNetwork



Then, use the ‘About this Group’ section on the LinkedIn group page to find funding opportunity specific subgroups.





Key Drivers

- Clean Energy and Pollution Reduction Act of 2015 (SB 350, De Leon, 2015)
- Renewables Portfolio Standard (SB X1-2, Smitian, 2011) and others
- The Global Warming Solutions Act of 2006 (AB 32, Pavley & Nunez, 2006)
- Bioenergy Feed-in Tariff (SB 1122, Rubio, 2012)
- Short-Lived Climate Pollutant Reduction Strategy (ARB, September, 2015)
- Proposed Short-Lived Climate Pollutant Reduction Strategy (ARB, April, 2016)
- Governor Brown's Clean Energy Jobs Plan (2011)
- Bioenergy Action Plan (2012)
- Integrated Energy Policy Report (Biennial)
- 2014 Disposal-Facility-Based Characterization of Solid Waste in CA
- Governor Brown's:
 - Executive Order to establish GHG reduction target of 40% below 1990 levels by 2020
 - Proclamation of a State of Emergency 10-30-15 - Unprecedented Tree Die-off
 - Proclamation of a State of Emergency 1-6-16 - Aliso Canyon Gas Leak



Background

- The Electric Program Investment Charge (EPIC) is funded by an electricity ratepayer surcharge established by the California Public Utilities Commission (CPUC) in 2011.
 - Annual program funds total \$162 million with 80 percent administered by the California Energy Commission.
- The purpose of EPIC is to:
 - Benefit the ratepayers of the three largest electric investor-owned utilities, Pacific Gas and Electric Co., San Diego Gas and Electric Co., and Southern California Edison
 - Fund clean energy technology projects that promote greater electricity reliability, lower costs, and increased safety.
 - Encourage technological advancement and breakthroughs to achieve state's statutory energy goals.



General Introduction

EPIC projects must fall within the following **program areas** identified by the CPUC:

- Applied research and development;
- Technology demonstration and deployment; and
- Market facilitation

And as identified in the EPIC Investment Plans, projects must fall within one of the general focus areas

✓ **strategic objectives**

And within one or more specific focus areas

✓ **funding initiatives**



Solicitation Purpose

- Solicit proposals that advance research and development for bioenergy technologies.
- Consistent with the 2015-2017 EPIC Investment Plan and in coordination with the CPUC
- The solicitation addresses three bioenergy funding initiatives.
- The focus is on the production of renewable electricity using:
 - woody biomass (derived from sustainable forest management activities)
 - food waste biomass.



Solicitation Specific Information

EPIC Triennial Investment Plan:

- **Program Area:** Applied Research and Development (AR&D)
- **Strategic Objective S3:** Develop Innovative Solutions to Increase the Market Penetration of Distributed Renewable and Advanced Generation
 - Funding Initiative S3.1 - AR&D: Efficient, Sustainable and Lower-Cost Bioenergy: Innovations to Improve Woody Biomass-to-Electricity Systems in California (**Group 1**)



Solicitation Specific Information

EPIC Triennial Investment Plan:

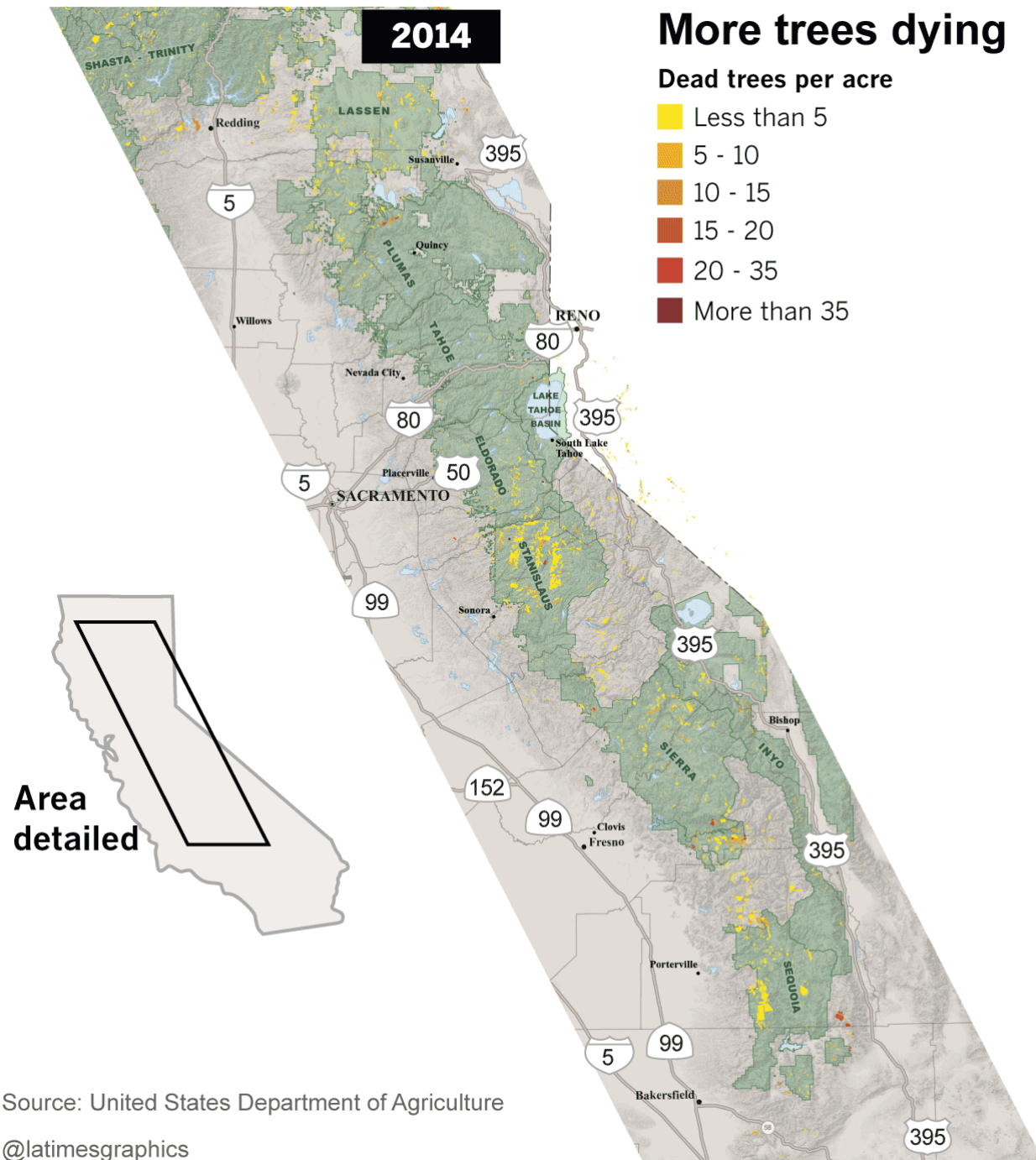
- **Program Area:** Technology Demonstration and Deployment (TD&D)
- **Strategic Objective S13** Demonstrate and Evaluate Biomass-to-Energy Conversion Systems, Enabling Tools, and Deployment Strategies
 - Funding Initiative S13.1- TD&D: Demonstrate and Evaluate Environmentally and Economically Sustainable Woody Biomass-to-Electricity Systems (**Group 2**)
 - Funding Initiative S13.2 - TD&D: Demonstrate and Evaluate Environmentally and Economically Sustainable Food-Waste Biomass-to-Electricity Systems (**Group 3**)

Solicitation Purpose

Responds to the Governor's 10-30-2015 Proclamation of a State of Emergency to protect communities against unprecedented tree die-off.

U.S. Forest Service:

- 40 million trees died between 2010 and late 2015
- 26 million trees have died between October 2015 - June 2016





Solicitation Purpose

Group 3

- Aims to bolster reliability of Southern California's electrical system following the Aliso Canyon gas leak.
- October 23, 2015, leak identified
- January 6, 2016, Governor Brown issued a state of emergency
- February 11, 2016, state officials announced the leak was permanently plugged.
 - Estimated 97,100 tonnes of methane released into the atmosphere, making it the worst natural gas leak in U.S. history in terms of its environmental impact.
 - The facility's limited current operations create a possibility of electricity service interruptions this summer.



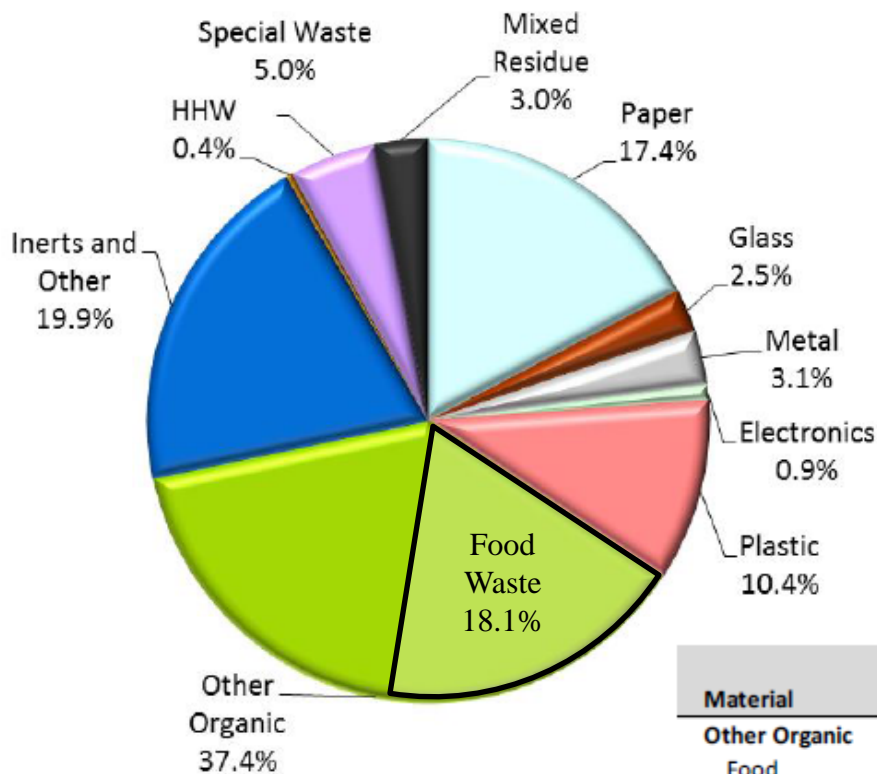
Solicitation Purpose

Group 3

- State Goal of 75 % recycling, composting or source reduction of solid waste by 2020
- 2014 CalRecycle study identifies food-waste as the largest component of solid waste disposed of at landfills – totaling 5.5 M tons annually
- ARB Short Lived Climate Pollutant Draft Report identifies landfills as 20% of CA methane emissions



Composition of California's Overall Disposed Waste Stream



Material	Est. Using 2014 Sector Percentages		
	Estimated Percent	+ / -	Estimated Tons
Other Organic	37.4%		11,558,054
Food	18.1%	1.6%	5,591,179
Leaves and Grass	3.8%	1.2%	1,172,925
Prunings and Trimmings	3.1%	1.0%	962,262
Branches and Stumps	1.7%	0.9%	528,493
Manures	0.6%	0.6%	174,808
Textiles	4.0%	0.7%	1,234,711
Carpet	1.8%	0.6%	570,212
Remainder/Composite Organic	4.3%	0.5%	1,323,465



Available Funding

Up to **\$23 million** available for this solicitation.

Project Group	Available Funding	Min Award	Max Award	Min Match Funding
Group 1: AR&D: Efficient, Sustainable and Lower-Cost Bioenergy: Innovations to Improve Woody Biomass-to-Electricity Systems	\$5,000,000	\$400,000	\$1,500,000	\$0
Group 2: TD&D Demonstrate and Evaluate Environmentally and Economically Sustainable Woody Biomass-to-Electricity Systems	\$10,000,000	\$1,000,000	\$5,000,000	20%
Group 3: TD&D Demonstrate and Evaluate Environmentally and Economically Sustainable Food Waste Biomass-to-Electricity Systems	\$8,000,000	\$500,000	\$4,000,000	20%



Eligible Bidders

- This is an open solicitation for public and private entities, except for publicly owned utilities.
- Applicants must accept the EPIC terms and conditions.
 - Standard T&Cs: <http://www.energy.ca.gov/research/contractors.html>
- Applicants are required to register with the California Secretary of State and must be in good standing to enter into an agreement with the Energy Commission. <http://www.sos.ca.gov>
- **Groups 2 & 3:** One member of the team needs to have completed at least one project of similar technology and capacity or begun construction of at least one other similar project.



Overall Project Requirements

- Located in CA & within a California Balancing Authority
- If not located in IOU territory - IOU PPA (**Groups 2 and 3**)
- IOU ratepayer benefits
- Cannot be a self-generation project in POU territory

A Publicly Owned Utility cannot be a prime or a subcontractor

Electricity generation must be the main focus/product of the project (generating valuable byproducts is acceptable and encouraged).

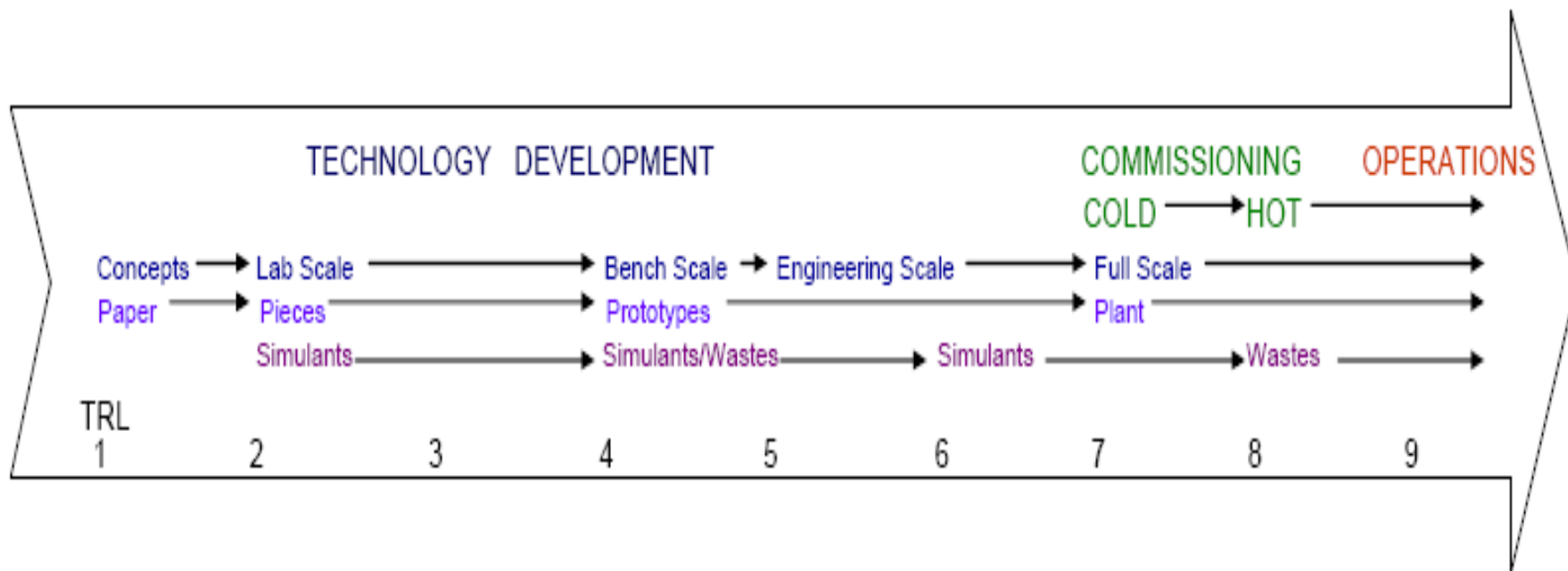
Measurement and Verification Plan

(Group 1) AR&D projects must be within the DOE range of TRL2 to TRL6

(Groups 2 & 3) TD&D projects must be within the DOE range of TRL7 to TRL9



Department of Energy Technology Readiness Level





Overall Project Requirements (cont.)

(Groups 2 and 3 only) Intention of project is securing an electricity generation Power Purchase Agreement (PPA) with one of the California Investor Owned Utilities (IOUs) or generating electricity for on-site use (IOU territory).

(Groups 2 and 3 only) Project is “community-scale” and sized for 3 MW or less of electricity generation.

(Groups 2 and 3 only) Process uses feedstock, with consideration for available biomass supply, cost, and distance from generation facility and environmental and/or community concerns.

(Groups 2 and 3 only) 500 hours of performance test data proving the project is demonstration ready.

(Groups 2 and 3 only) Development Experience - team has one member that has completed at least one project of similar technology and capacity or begun construction of at least one other similar project.

(Groups 2 and 3 only) Project is **not** primarily focused on injecting biomethane into natural gas pipelines.



Overall Project Requirements (cont.)

(Groups 1 and 2 only) Fuel source is byproduct of sustainable forest management activities, as explained in the CPUC SB 1122 BioMAT program.*

(Groups 1 and 2 only) Project is not solely addressing the harvesting and/or transportation of woody biomass or other issues without having a direct tie to woody biomass-to-electricity generation.

(Group 2 only) Portion of woody biomass comes from High Hazard Zones, defined by CAL FIRE, as directed in the Governor's 10-30-2015 Tree Mortality Proclamation.

* SB 1122 - 50 MW for bioenergy using byproducts of sustainable forest management.

CPUC describes types of sustainable forest management activities as:

- fire threat reduction;
- fire safe clearance activities;
- infrastructure clearance projects; and
- other sustainable forest management activities (Attachment B)



Overall Project Requirements (cont.)

(Group 3 only) Project is located in Southern California, defined as the following 10 counties: Imperial, Kern, Los Angeles, Orange, Riverside, San Bernardino, San Diego, Santa Barbara, San Luis Obispo and Ventura.

(Group 3 only) Feedstock includes food-waste (for example, from schools, hospitals, prisons, or residential food-waste programs), Fats Oil and Grease (FOG) and/or Grease Trap Waste (GTW) recovery from restaurants.

(Group 3 only) Project is not solely focused on the transportation or processing of food-waste or other issues without having a direct tie to biomass-to-electricity generation.

SB1122 - 110 MW for biogas from wastewater treatment, municipal organic waste diversion, food processing, and codigestion

<http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M143/K960/143960061.pdf>



Key Dates

Activity	Action Date
✓ Solicitation Release	6/27/2016
Pre-Application Workshop Sacramento	7/20/2016
Pre-Application Workshop Merced	7/21/2016
Pre-Application Workshop Diamond Bar	7/22/2016
<u>DEADLINE FOR WRITTEN QUESTIONS</u>	<u>7/29/2016 3:00 pm</u>
Anticipated Distribution of Questions and Answers	Week of 8/15/2016
<u>DEADLINE TO SUBMIT APPLICATIONS (Phase 1)</u>	<u>8/29/2016 3:00 pm</u>
Anticipated Posting of Phase 1 Results	10/17/ 2016
<u>DEADLINE TO SUBMIT APPLICATIONS (Phase 2)</u>	<u>12/16/2016 3:00 pm</u>
Anticipated Notice of Proposed Award Posting Date	March /2017
Anticipated Energy Commission Business Meeting Date	9/13/2017
Anticipated Agreement Start Date	October 2017
Agreement Termination Date	October 2021



GFO Application Requirements *(for Electronic Application Submission)*

- Preferred method of Delivery is the Energy Commission Grant Solicitation System, available at: <https://gss.energy.ca.gov/>.
 - Electronic files must be in Microsoft XP (.doc format) and Excel Office Suite formats, unless originally provided in solicitation in another format.
- Attachments requiring signatures may be scanned and submitted in PDF format.
- Completed Budget Forms (Attachment 7) must be in Excel format.
- First-time users must register as a new user to access system.
- The system will not allow applications to be submitted after the due date and time
 - (Phase 1 - 8/29/16 at 3:00 p.m. PDT; Phase 2 – 12/16/16 at 3:00 p.m.).



Live Demo Tutorial

(for Electronic Application Submission)



GSS How to Apply Video.mp4



GFO Application Requirements

(for Hard Copy Submission)

- Submit Applications with all attachments in the order specified by the due date and time listed in Section III of the manual.
- Application documents should meet formatting requirements, page limits, and number of copies specified on pages 29-30 (Phase 1) and pages 31-32 (Phase 2).
 - **Phase 1 - Three** hard copies and **one** electronic* copy
 - **Phase 2 - Six** hard copies and **one** electronic* copy

* on a CD-ROM or USB memory stick



Application Requirements

Each Applicant must complete and include the following:

1. Application Form (Phases 1 & 2)	8. CEQA Compliance Form (Phase 1 – Optional – Phase 2 - Required)
2. Executive Summary (Phase 2 ONLY)	9. References and Work Product (Phase 2 ONLY)
3. Fact Sheet (Phase 2 ONLY)	10. Contact List (Phase 2 ONLY)
4. Project Abstract & Narrative (Phases 1 & 2 accordingly)	11. Intent Letters (Phase 1 ONLY, as applicable) Commitment and Support Letters (Phase 2 ONLY)
5. Project Team (Phase 2 ONLY)	12. Cost Benefit Calculations (Groups 2 and 3 – CPUC LCOE Worksheet / other – Phase 2 ONLY)
6. Scope of Work (Phase 2 ONLY)	13. Performance Data (Groups 2 and 3 Required) (Phase 2 ONLY) 500 hours
7. Budget (Phase 2 ONLY)	

Be consistent in your application!



Project Abstract (Phase 1)

- Explain how it meets the solicitation requirements and why it is worth funding.
- Include detailed description of the proposed project according to the Application and Technical Abstract Screening Criteria Section IV, part E.
- Abstract should include: **(limit 8 pages)**
 - Why your project is important?
 - What is the development stage, project focus, and group specific qualifications?
 - How will the project advance the generation of renewable electricity?
 - Is there a measurement and verification plan?
 - How will IOU ratepayers benefit?
 - Other criteria described in the Technical Abstract Screening Criteria

Provide enough detail so that reviewers will be able to evaluate the proposal against each of the scoring criteria



Project Narrative (Phase 2)

- Explain how it meets the solicitation requirements and why it is worth funding.
- Include detailed description of the proposed project according to the Application Scoring Criteria – Section IV, part G.
- The narrative should explain things such as: **(limit 15 pages)**
 - Why your project is important?
 - How will it advance, supplement, and/or replace current technology and/or scientific knowledge?
 - Why is EPIC funding justified – why is the work not adequately funded by competitive or regulated markets?
 - How will IOU ratepayers benefit?
 - What it is going to cost ratepayers, and why is it worth it?
 - Other aspects described in the Scoring Criteria

Provide enough detail so that reviewers will be able to evaluate the proposal against each of the scoring criteria



Scope of Work

- Tell us exactly what you are proposing to do in your project.
- Identify what you will deliver to the Energy Commission.
- Be sure to include in the tasks:
 - An annual report
- Be sure to include Project Schedule (**Attachment 6a**)



Budget (Attachment 7)

Identify how you will be spending EPIC and match funding to complete this project.

- Each applicant and major subcontractor must complete the budget form, including all budget forms.
- This must be submitted in the same format as it is provided.
- Do not delete sheets or rows, use the hide/expand functions.
 - Shaded cells are automatically filled or calculated.



Intent, Commitment and Support Letters (Attachment 11)

Phase 1 AR&D Pilot & TD&D

- Intent Letter - documents intent to secure site control and feedstock agreements

Phase 2 AR&D Pilot & TD&D

- Commitment Letter - commits an entity or individual to providing the service or funding described (site control, feedstock agreement, match funding, other)
 - Any project partners that will make contributions to the project must submit a commitment letter.
- Local Air District Letter of Awareness - provided before an award is granted.
- **TD&D ONLY** - Community-scale support - may be submitted either as part of the application package or prior to approval at an Energy Commission Business Meeting

Phase 2 All Applicants

- Support Letter - **at least one** support letter from a project stakeholder detailing an entity's or individual's support for the project.



Match Funding

- **Group 1** - may receive bonus points for match funding.
- **Groups 2 and 3** - **20 percent** of the requested EPIC funds **is required** as match funding. Scoring criteria and points only apply to match funding commitments **above minimum requirements**.
- Applicants may receive up to 10 additional points based on the criteria below:
 - Up to 5 points will be awarded based on the percentage of match funding that **exceeds the minimum match funding amount**. This ratio will be multiplied by 5 to yield the points, and rounded to the nearest whole number.

For example: If requested EPIC funds are \$1,000,000 and match funds exceed the minimum by \$500,000, the match funding ratio is 0.50. The proposal will be awarded 3 points ($5 \times 0.50 = 2.5$, rounded to the nearest whole number = 3).
 - The remaining 5 points will be based on the level of commitment, type of match funding, dollar value justification, and funding replacement strategy described in the match funding commitment letter. See application scoring scale.

Phase 2 - Match funding contributors must submit match funding commitment letters that meets the requirements of Attachment 11. Failure to do so will disqualify the match funding commitment from consideration.



How will my Application be Evaluated?

→ Phase 1 Application Screening (Administrative)

Application Admin Screening Process

1. Energy Commission staff screens applications per criteria in the solicitation (page 47).
2. Criteria is evaluated on a pass/fail basis.
 - ✓ Applicants must pass all screening criteria or the application will be disqualified.

Some Reasons for Disqualification

- ✓ Application not submitted by the specified due date and time.
- ✓ Applicant did not address one of the eligible project groups.
- ✓ Requested funding is outside of the specified minimum/maximum range.
- ✓ Project completion date beyond the specified agreement end date.
- ✓ Application does not include one or more support letters.
- ✓ Application contains confidential material.



How will my Application be Evaluated?

→ Phase 1 Technical Abstract Screening

Application Admin Screening Process

1. Energy Commission staff screens applications per criteria in the solicitation (page 47 & 48).
2. Criteria is evaluated on a pass/fail basis.
 - ✓ Applicants must pass all screening criteria or the application will be disqualified.

Some Reasons for Disqualification

- ✓ Application does not meet the project group requirements.
- ✓ Proposed project is not in the required Development Stage.
- ✓ Proposed project does not meet the required Group Focus or Group Specific Qualifications
- ✓ Proposed project is not designed to generate renewable electricity
- ✓ Proposed project does not have a measurement and verification plan.
- ✓ Proposed project does not describe criteria as required.



How will my Application be Evaluated?

→ Phase 2 Administrative Screening

Application Admin Screening Process

1. Energy Commission staff screens applications per criteria in the solicitation page 49.
2. Criteria is evaluated on a pass/fail basis.
 - ✓ Applicants must pass all screening criteria or the application will be disqualified.

Some Reasons for Disqualification

- ✓ Application not submitted by the specified due date and time.
- ✓ Applicant did not address one of the eligible project groups.
- ✓ Requested funding is outside of the specified minimum/maximum range.
- ✓ Project completion date beyond the specified agreement end date.
- ✓ Application does not include one or more support letters.
- ✓ Application contains confidential material.



How will my Application be Evaluated?

- **Evaluation Committee applies the scoring scale to the scoring criteria.**
- **Applications must obtain a minimum passing score of 70% for criteria 1-4 (or 49 points) in order to continue evaluation, and must also obtain a minimum passing score of 70% overall for criteria 1-7 (or 70 points), in order for an Application to be considered for funding. Passing applications will be considered for match funding preference points.**
- **Each Applicant must review the Evaluation and Award Process section of the solicitation and ensure that the application provides a clear and complete response to each scoring criteria in the project narrative.**

Scoring Criteria (pages 51-55)	Maximum Points
Technical Merit and Need	20
Technical Approach	20
Impacts and Benefits for CA IOU Ratepayers	20
Team Qualifications, Capabilities and Resources	10
Budget Cost-Effectiveness	10
EPIC Funds Spent in CA	15
Ratio of Direct Labor and Fringe Benefit Rates to Loaded Labor Rates	5
Total	100
Minimum points to pass	70



How can I receive optional bonus points?

- **Match**
 - **Group 1**
 - **Groups 2 and 3 - above 20%**
- **Disadvantaged Communities**
Groups 1, 2 , and 3
- **High Fire Hazard Zone - Group 1**
- **Leveraging of food recovery collection and distribution programs – Group 3**

Scoring Criteria (pages 51-57)	Maximum Points
8. Match Funding	10
9. Disadvantaged Communities	5
10. High Hazard Zone	5
11. Leveraging of food recovery collection and distribution programs	5
<u>Possible Bonus Points</u>	
Group 1 - Criteria 8, 9 & 10	20
Group 2 - Criteria 8 & 9	15
Group 3 – Criteria 8, 9 & 11	20



What is the Technical Scoring Scale?

% of Possible Points	Interpretation	Explanation for Percentage Points
0%	Not Responsive	Response does not include or fails to address the requirements being scored. The omission(s), flaw(s), or defect(s) are significant and unacceptable.
10-30%	Minimally Responsive	Response minimally addresses the requirements being scored. The omission(s), flaw(s), or defect(s) are significant and unacceptable.
40-60%	Inadequate	Response addresses the requirements being scored, but there are one or more omissions, flaws, or defects or the requirements are addressed in such a limited way that it results in a low degree of confidence in the proposed solution.
70%	Adequate	Response adequately addresses the requirements being scored. Any omission(s), flaw(s), or defect(s) are inconsequential and acceptable.
80%	Good	Response fully addresses the requirements being scored with a good degree of confidence in the Applicant's response or proposed solution. No identified omission(s), flaw(s), or defect(s). Any identified weaknesses are minimal, inconsequential, and acceptable.
90%	Excellent	Response fully addresses the requirements being scored with a high degree of confidence in the Applicant's response or proposed solution. Applicant offers one or more enhancing features, methods or approaches exceeding basic expectations.
100%	Exceptional	All requirements are addressed with the highest degree of confidence in the Applicant's response or proposed solution. The response exceeds the requirements in providing multiple enhancing features, a creative approach, or an exceptional solution.



What is Important?

Scoring Criteria	The Question to Answer
Technical Merit and Need	Why should your project be funded?
Technical Approach	How are you going to do what you are going to do?
Impacts and Benefits for CA IOU Ratepayers	How will your project benefit ratepayers?
Team Qualifications, Capabilities and Resources	Who is going to make this project happen, and what resources are available to make it happen?
Budget Cost-Effectiveness	Are you spending money wisely?
EPIC Funds Spent in CA	This is a direct calculation based on budget forms.
Ratio of Direct Labor and Fringe Benefit Rates to Loaded Labor Rates	This is a direct calculation based on budget forms.



Questions and Answers

Please send all questions related to GFO-15-325 to:

Crystal Presley-Willis

Commission Agreement Officer

1516 Ninth Street, MS-18

Sacramento, CA 95814

(916) 654-5067

(916) 654-4423 (fax)

Crystal.Presley-Willis@energy.ca.gov

Deadline to submit questions:

Friday, July 29, 2016 3:00 PM PDT



Thank you!